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ABSTRACT

The purpose of this study was to determine what kinds of people are motivated to join a medical self-help group and whether and in what areas of psychological and social functioning such self-help groups have positive benefits for adolescents and their families. Extensive survey questionnaires were sent throughout the United States to all former and current members of nine scoliosis clubs which existed in the spring of 1980. The questionnaires contained measures of motivations and expectations for joining groups, relationships with the medical profession, psychosocial adjustment, family relationships, attitudes toward scoliosis, social support and coping styles, as well as questions related to demographic characteristics and medical histories. Completed questionnaires were returned by 199 adults (including 142 parents of children with scoliosis) and 140 young people. Another set of modified questionnaires was sent to a randomly selected sample of 1000 adults who had written to the Scoliosis Association in response to an article about the association in a nationally circulated Sunday magazine supplement. Three hundred and fifty-two adults (including 160 parents) and 143 children returned questionnaires. Results suggest that membership in a medical self-help group benefits scoliotic children and their parents in only a few areas. Problems of the cross-sectional comparison group design employed are discussed. (Author/RH)

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ILLNESS AND PREVENTION:

SELF-HELP GROUPS FOR FAMILIES FACED WITH SCOLIOSIS

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Presented at the annual meetings of the American Psychological Association, Los Angeles,
California, August, 1981.

When I was young-at seven
I got a piece of news.
This news, it said:
"Curve ahead"!

I wondered if I was going to die.

To one doctor I was a guinea pig.
To another I was a REAL child.
Both agreed it was my fate
That my back would not be straight
Without a brace!

What would it look like? How would it feel?
Would I ever be able to kneel?
I knew the brace would never be fun.
Would I ever be able to run?

On the playground I didn't belong.
All that snickering seemed to be wrong.
"Is it catching?", someone would say.
With a painful feeling I would look away.
Like a shy kangaroo with nowhere to hide,
I went bumpity, bumpity on the slide.

The move to the east was like starting again-
Seeing new doctors, trying new braces,
Starting new schools, meeting new faces.
I felt it would never be over.

A club was formed-just for us.
Sharing our feelings with someone who knew,
And learning and watching while each of us grew-
It was great!

No longer was I a stranger.

MYSELF/MY INNER SELF by Riva Naimark
Member, Manhattan Chapter of the Scoliosis Association

Serious illness has been recognized as a form of stress to which individuals make a variety of responses and adaptations. Some authors (Caplan, 1964; Moos, 1977) have suggested that each illness has its own set of "adaptive tasks" which may include contending with the inconvenience and expense of medical treatment, pain, uncertainty, increased dependency on others, and challenges to one's sense of bodily integrity. Research evidence indicates that the success in meeting these adaptive tasks via specific behavioral and cognitive strategies which are utilized has consequences for immediate and perhaps for long-term psychological well-being (Adams & Lindemann, 1974; Folkman & Lazarus, 1980).

Other work has indicated that not only is the afflicted individual forced to contend with the problems and pressures of illness, but that disease also imposes stresses on family members. Wortman and Dunkel-Schetter (1979), for example, recently documented the emotional upset that families of cancer patients face including guilt, resentment, and confusion over role ambiguities.

Given these stresses and the potential for the development of maladaptive social and psychological behavior, seriously ill individuals as well as their families are a fruitful locus for primary prevention efforts. Unfortunately, professionals have devoted little attention to this group and, given current budget cut-backs in all human services, only a modest deployment of support for these at-risk individuals can be expected. Patients and their families have however been providing social and psychological support to each other in the form of self-help or "mutual aid" groups for many years.

These groups are not unique to individuals facing medical problems as they span the spectrum from those contending with weight problems to groups for those sharing a "deviant status" (i.e., blacks, gays). Self-help groups have gained increasing attention in the last few years as an alternative to traditional mental health services because of their apparent utility in providing support for those who share similar stresses (e.g., Caplan and Killilea, 1976; Lieberman & Borman, 1979). Largely self-governing and self-regulating, they offer an available and empathetic support network for those in need by those in need at minimal or no cost. Bond et. al. (1979) define a medical self-help group as a "network of persons suffering from the same affliction or condition who meet together or otherwise contact each other regularly to exchange information and share common experiences" (p. 44). People join such groups for both emotional support and acquisition of normative information (Levy, 1976).

A self-help organization which has addressed the psychosocial needs of scoliosis patients and their families is the Scoliosis Association, Inc. Scoliosis is a medical condition in which there is abnormal development (curvature) of the spine which can create physical deformities and affect other internal organs (i.e., heart, lungs) if untreated.

The precise etiology of the condition is unknown in most cases, though medical scientists believe it may have a genetic origin. Scoliosis is most often diagnosed during adolescence or pre-adolescence and is six times more prevalent in girls than boys. According to the Scoliosis Research Society of the American Academy of Orthopedic Surgeons, approximately one million young people in the United States have some degree of scoliosis. While mild forms may require only periodic examinations for progression of the curve, more severe cases may require extensive and prolonged medical treatment in the form of mechanical bracing and/or corrective surgery.

Relatively little empirical work has been done to examine the impact of scoliosis and its treatment on the emotional well-being of adolescents. Clayson and Levine (1976) and Podietz (1975) suggest that scoliosis may have an adverse impact on adolescents' body image and personality development with concomitant lowering of self-esteem. Though no formal research has explored the ramifications of scoliosis on family functioning, Shulman and Shulman (1976) suggest that parents of scoliotic children face the stresses of financial burdens and uncertainty of outcome, as well as feelings of isolation, guilt, anger, and helplessness which may, in turn, affect parent-child and marital relationships. Clearly, scoliosis places strains on patients and their families and may have a negative effect on the adolescent's long-term emotional adjustment. Podietz (1975) suggests that children with scoliosis are good candidates for the anticipated therapeutic effects of self-help groups.

The Scoliosis Association, Inc. is a non-profit self-help organization for scoliosis patients and their families. Founded in 1976 by the parents of a teenage girl with scoliosis, it acts as the umbrella organization for self-help chapters throughout the United States. The Association fosters the development of new clubs, provides information and guidance to established ones, publishes a quarterly newsletter, and has compiled and distributed several sourcebooks for health professionals. The purpose of the local groups is to offer an opportunity for concerned parents and children to meet and share information about scoliosis, to help each other cope with the emotional issues

related to having scoliosis or parenting a child with it, and engage in outreach to others who share this problem.

In this study of the Scoliosis Association's chapters we were interested in determining what kind of people are attracted to such groups and to document in what areas of psychological and social functioning they have positive benefits for adolescents with scoliosis, their parents, and the family as a whole.

METHOD

Study Design and Sample. Extensive survey questionnaires were sent to all former and current members of the nine scoliosis clubs throughout the United States which existed in the spring of 1980 (n=858). One questionnaire was designed for use by adult patients with scoliosis and by parents of children with the condition; another was designed for their children with scoliosis. Completed questionnaires were returned by 199 adults (including 142 parents of children with scoliosis) and 140 young people. This represented approximately a 23% return rate.

Another set of modified questionnaires was sent to a randomly selected sample of 1000 adults who had written to the Scoliosis Association in response to an article about the Association in a nationally circulated Sunday magazine supplement.

These individuals expressed interest in the self-help clubs but did not have one in their local area. Three hundred and fifty-two adults (including 160 parents) and 143 children returned questionnaires representing a return rate of about 35%. None of these people had ever participated in a scoliosis self-help group and were thus used as a comparison group to test the possible effects of self-help group membership.

The two samples were similar in demographic characteristics: primarily intact, white, middle-class fairly well-educated families. Association members, however, had higher incomes and were somewhat better educated than the comparison group. In almost all cases mothers completed the parents' questionnaire. Children were on an average 15 years old and most of the young people who responded (89%) were female, reflecting the predominance of scoliosis among girls. Group members were predominantly Jewish (36%), Catholic (29%), and Protestant (25%), while non-members were Protestant (49%) and Catholic (35%). This

information is summarized under "Background variables" in Tables],2,3, and 4.

Measures. The survey questionnaires were developed after speaking with executive officers and group leaders of the Scoliosis Association, attending meetings of the Manhattan chapter, and extensively reviewing the self-help literature. The questionnaires contained measures of motivations and expectations for joining groups, relationships with the medical profession, psychosocial adjustment, family relationships, attitudes toward scoliosis, social support and coping styles, in addition to demographic characteristics and medical histories. Unless otherwise indicated, the measures were included in both parent's and children's questionnaires.

Psychosocial Adjustment. Multiple measures of mental health and adjustment to scoliosis were included in the questionnaires. Twenty-six items from the Hopkins Symptoms Checklist (Derogatis, Lipman, Rickels, Uhlenhuth & Covi, 1974) were included in both the parent's and children's questionnaires to assess the frequency of occurrence of current psychological and somatic complaints. Factor analysis of the items indicated one substantive factor; therefore, the number of symptoms reported were summed to create a Psychosomatic Symptoms index.

The scoliotic child's self-image and attitudes toward having scoliosis were deemed to be important components of psychosocial adjustment. A three-item scale, adopted from Rosenberg (1965) was used to assess level of Self-esteem. Cronbach's alpha was .72. Fifteen items from Derogatis, Melsaratos, and Rosenberg (1965) and Felton, Hinrichsen and Revenson (Note 1) were included in the child's questionnaire. Factor analysis of these body image items produced three conceptually and empirically distinct factors. Feelings of Attractiveness is comprised of items concerning acceptance of one's physique, e.g., "I am as attractive as my friends, " "I think I look good in a bathing suit." The other two factors focused less on one's physical self-image, and more on acceptance of one's self as a scoliotic. Feelings of Shame includes such items as "I am embarrassed to tell my friends I have scoliosis" and "I am ashamed that I have scoliosis," while Feelings of Alienation contains items using other's perceptions as the referent: "I think other people are

uncomfortable being around me because I have scoliosis," "I am envious of those who don't have scoliosis". Self-perceptions of Body Image were also assessed by a pictorial measure developed by the authors (see Figure 1). Children were presented with a series of seven randomly ordered drawing of spines depicting mild to severe curvature, as well as one straight spine, and asked to indicate "which comes closest to what you look like?"

Measures of generalized mastery, social support, and satisfaction with medical care were considered to be important indicators of parents' adjustment to having a scoliotic child. Mastery is similar to the concept of locus of control and indexes beliefs about self-efficacy and control over the events in one's life. Coefficient alpha for this seven-item scale adopted from Pearlin and Schooler (1978) was .81.

The availability and size of one's Social Support network was indexed by a three-item scale which obtained a reliability of .69. Items in this scale are "Besides your spouse, how many people can you rely on in an emergency?", "Besides your spouse, how many people can you trust and talk to about your problems?" and "How many people can you talk to freely about scoliosis?" One of the functions of medical self-help groups is to facilitate the development of a better relationship between doctor and patient. A four item scale developed by the authors, provided a measure of satisfaction with the medical care received, and the relationship with the physician. The reliability coefficient (Cronbach's alpha) for Medical Satisfaction was .87.

Family Relationships. Several measures assessed the degree of family conflict, cohesion, and change in relationships, the extent to which parents reported psychological strains directly related to parenting issues, and how they coped with them. The primary measures of family relationships were derived from the relationship dimension of the Family Environment Scale (Moos & Moos, in press). Cohesiveness measures the degree to which family members are helpful and supportive of one another; Conflict assesses the extent to which discord and discontent are characteristic of family interaction; and Expressiveness measures the degree to which family members can share their feelings. Alpha coefficients for these scales were .86, .73, and .65 for the parent sample and .88, .78, and .57

for children. The scales were also summarized in one index called Positive Family Environment.

Three measures of the psychological strains resulting from parent-child conflict were derived from Pearlin and Schooler's (1978) items concerning parental role strain. Misbehavior describes problems with the child's behavior outside the home (e.g., "How often do you have to give some attention to your child(ren) failing to get along with others the same age?"). Disrespect and Uncooperativeness describes children's

lack of conformity to parental standards (e.g., "How often are you disobeyed?").

The third area of parental strain, Non-adherence to Treatment has a completely different and situation-specific focus: the child's non-compliance with the prescribed treatment regimen (e.g., failure to wear the brace). High scores indicate degrees of misbehavior, disrespect, and non-adherence. Reliability coefficients for these scales were .72, .69, and .70 respectively.

Coping was assessed by asking parents about their usual way of dealing with parental strains. For example, respondents were asked how often they reached compromises with their children, how often they punished them, and how often they sought help in dealing with problems of parenting. Thirty-seven items drawn from Pearlin and Schooler (1978) were subjected to a principal components factor analysis (varimax rotation) (Nie, Hull, Jenkins, Steinbrenner & Bent, 1975). In all, six coping factors emerged; scales were computed from these factors by summing all items which loaded above .30 on a given factor. The six coping strategies were labelled Minimization, Negotiation, Rationalized Withdrawal, Punitiveness, Advice-seeking, and Positive Comparisons. Alpha coefficients ranged from .53 to .74. Appendix A contains the items, item loadings and alpha coefficients for the six coping strategies.

Group Participation. Since an important research question of this study was who joins medical self-help groups and why, several measures in the parent's questionnaire focused on these issues. Fourteen reasons for joining medical self-help groups were developed from Levy's (1976) typology, and subjects were asked to indicate for each reason how important it had been for joining the group (or, for the comparison group

members, how important a reason it would be). Exemplary items include: "To meet other families with scoliosis who could understand my feelings", "To obtain information about scoliosis and its treatment", and "To share useful information I gained from having scoliosis or having a child with scoliosis". Factor analysis of these items produced three factors, two directly corresponding to Levy's description of the functions of self-help groups--emotional support for members and acquisition of normative information--and a third reflecting the "helper principle" (Riessman, 1965), i.e., to help others in a similarly stressful situation. The three scales labelled appropriately, Receive Emotional Support, Receive Information, and Help Others, obtained acceptable alpha coefficients of .82, .83, and .76 respectively. Respondents were also asked about the number of other organizations they participated in and how active they had been in them.

Medical History. A number of questions related specifically to the child's treatment (including whether the spinal curvature had only been watched to whether both bracing and surgery had been performed to the correct the condition) were indexed in Treatment Severity. In addition the degree of curvature on detection, current curvature, and whether exercises were prescribed were ascertained.

DATA ANALYSIS

Since the focus of this paper is to determine what kinds of people are motivated to join a medical self-help group and whether and in what areas of psychological and social functioning self-help groups have positive benefits for adolescents and their families, the data base for these analyses included the 109 parents and 94 children who belonged to scoliosis clubs and had attended meetings of these clubs. (Not all members attended meetings; some only receive issues of the Association's newsletter). The comparison group included all 160 parents and 143 children who participated in the survey; none of these individuals had ever attended a scoliosis club meeting.

RESULTS

Parents of Scoliotic Children. T-tests were performed to determine whether significant differences existed between those who attended meetings of scoliosis clubs and those

who did not. Since significant differences between the groups emerged with respect to family income, parental education, and treatment severity, and significant correlations existed between a number of the dependent measures and those background variables, they were used as covariates in a set of analyses of covariance. The results of the t-tests and analyses of covariance are presented in Table 1. Chi-square analyses may be found in Table 2.

In the psychosocial domain, t-test results indicated that club members showed significantly fewer psychosomatic symptoms and were more satisfied with medical care than those parents who did not belong to clubs. After the effects of the three covariates (income, education, and Treatment Severity) group parents continued to report fewer symptoms ($p < .06$) and greater medical satisfaction. Interestingly, a significant difference in Mastery emerged, with non-members reporting higher levels than club participants. There were no significant differences between the two groups in the amount of social support received from members of their social networks.

In the area of family relationships, the t-test results revealed that club families showed greater Expressiveness than non-member families although this finding did not remain significant in the covariance analysis. Club parents also showed a greater use of the coping strategy of Minimization, though the strength of this effect was reduced slightly in the analysis of covariance ($< .08$). Two significant differences which did not initially appear in the t-tests, but emerged in the analyses of covariance were greater reported family Conflict ($p = < .06$) and a lesser use of the coping strategy of Positive Comparisons by club members as contrasted with non-members.

Important differences between the two groups existed in the domain of group participation. Club members reported that they were initially motivated to attend scoliosis club meetings to Receive Emotional Support and less to Receive Information or to Help Others than did non-participants (who were reporting why they would be motivated to join a club). Differences with respect to the desire to Receive Information did not remain significant after covariance analyses, although the other two motivations to join did. Scoliosis club members also

belonged to more organizations and were more active in them than non-members. Although differences in the level of activity did not remain significant after the effects of the covariates were removed, differences in the number of organizational participations did. In addition, the members and non-members of scoliosis clubs did not differ in the frequency with which parents assumed leadership roles in the other organizations they attended.

Medical and treatment histories between the two groups showed little similarity. Group members' children had greater degrees of curvature upon detection, wore or had worn braces for a longer period of time, had more severe and demanding treatment regimens, and were more often required to do physician-prescribed exercises. Interestingly, scoliosis club members tended to have more children with scoliosis than did non-member parents. In addition, members' children were more often former rather than current patients. Group parents had consulted a counselor or therapist somewhat more ($p < .08$) than had non-members, although there was no difference in the frequency with which members and non-members' children received professional psychological services.

Children with Scoliosis. Although t-test results revealed somewhat greater Feelings of Alienation and a better perception of Body Image by those children who had attended scoliosis club meetings than those who did not, these differences disappeared when the effects of demographic and treatment^{variables} were controlled (e.g., age of child, whether he or she had ever had surgery, or ever had bracing). No differences emerged in either analysis with respect to Self-esteem, Psychosomatic Symptoms, Feelings of Attractiveness, or Feelings of Shame. In the area of family relationships some important differences between the two groups did exist. Scoliosis club children reported less family Cohesion, greater family Conflict, and less close relationships with their mothers. These remained significant after analyses of covariance; in addition reports by club children of an overall less Positive Family Environment emerged as significant. The results of these analyses may be found in Tables 3 and 4.

DISCUSSION

These results suggest that membership in a medical self-help group benefits parents of scoliotic children in only a few areas. Group parents tended to report somewhat fewer psychosomatic symptoms and were more satisfied with medical care than non-participating parents. On the other hand, parents involved in self-help groups had a diminished sense of mastery over their lives, greater family conflict and used minimization techniques more often and comparisons with others less often in dealing with parental strains than did non-member parents. This particular configuration of coping styles and low perceptions of self-efficacy (mastery) was found by Pearlin and Schooler (1978) to be ineffective in reducing the effects of parental strains on psychological health.

Similarly membership in scoliosis self-help groups seems to yield few benefits for children afflicted with the condition. In fact, we see a pattern of results which demonstrates that family relationships are poorer among group children than among non-participating young people.

An initial examination of these findings fails to confirm our hypotheses that membership in self-help groups should yield benefits to both parents and children; in fact, they suggest that groups might even have a negative impact on family functioning. This however is in direct opposition to the fact that 70% of members reported that scoliosis clubs were highly successful in meeting the needs which originally brought them to meetings. This is also incongruent with enthusiastic public and private testimonials by groups members to the authors.

Unfortunately the cross-sectional comparison group design employed in this study cannot categorically conclude that the obtained results reflect only the impact of group membership on psychosocial adjustment. Instead, what may be affecting what we designated as outcomes of group membership are differences which existed between the groups prior to membership. Although the comparison (non-member) sample was an appropriate one (e.g., individuals who wrote the Association seeking possible information about its activities and who indicated interest in joining if there were

groups in their areas), those who actually attended groups when given the opportunity may have had poorer family relationships to begin with. In this study reports by individuals who attended scoliosis club meetings of greater family conflict, congruent with their children's reports of a less than positive family situation, create a picture of families with domestic difficulties that are most probably not a consequence of participating in a self-help group, but rather reflect conditions which existed before they joined. Although we hypothesized that parents would gain a greater sense of mastery through group membership, the fact that they reported fewer feelings of self-efficacy than non-participants may mirror the pre-existing problems in family functioning. In fact, when the reasons which group parents gave for initially coming to meetings are compared with those given by non-member families we see that those who did participate looked to clubs much more to deal with emotional problems than did non-participants. In other words, people who actually joined groups may have felt less able to deal effectively with emotional problems connected, and perhaps, unconnected with scoliosis.

Another important difference between the two groups was that families who attended meetings faced a more severe array of medical problems. Treatments were more demanding and continued for longer periods of time, the degree of curvature of the child's spine was greater, and families tended to have more than one scoliotic child. (In addition, families who attended groups tended to have more children.) These medical demands may have compounded an already difficult family situation by creating additional economic and emotional stresses on the parent, the child, and the family.

On the other hand, parents who attended clubs had the advantages of greater educational and economic resources than did non-participants. These resources, known to be related to better positive mental health and to the use of more "effective" coping strategies (e.g., Bradburn, 1969; Gurin, Veroff & Feld, 1960; Pearlin and Schooler, 1978) were effectively cancelled out in the covariance analyses.

The fact remains however that our results indicate few gains for parents and children as a result of group membership. There is one notable exception however.

Group parents are clearly more satisfied with their relationships with physicians and with the medical care they received. Since one of the primary functions of the clubs is to make members better informed and more actively involved patients, clubs appear to be achieving this goal. This finding may allay the concern of some doctors who, in fact, are reluctant to support self-help groups because of their fear that groups actually erode the doctor-patient relationship because of club "meddling and misinformation".

Although these analyses suggest that the benefits of membership in self-help groups for parents and children faced with scoliosis may be circumscribed to an increase in satisfaction with medical care which is received, the finding is important. The people who actually joined groups faced heavier medical demands and greater family stresses than others and were therefore particularly well-suited for a primary prevention effort of this kind. Analyses are currently underway to more closely examine benefits derived from group membership for those under the more demanding forms of treatment (bracing and surgery) as well as to see if individuals in clubs which were found to be more successful (i.e., had fewer organizational problems; Hinrichsen & Revenson, Note 2) show more gains than participants of less successful clubs.

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Table 1

T-tests and Covariance Analyses for Parents

Variables	t-tests					Covariance Analyses ²		
	Mean	S.D.	df	t	Prob. ¹	F	df	Prob.
I. PSYCHO-SOCIAL								
MASTERY								
Club Members	3.78	.70	255	.41	ns	3.63 ³	4,220	**
Non-Members	3.74	.64						
PSYCHO-SOMATIC SYMPTOMS								
Club Members	9.65	5.77	267	-3.35	**	3.71	4,266	(.06)
Non-Members	12.02	5.63						
SUPPORT								
Club Members	5.46	2.45	241	.64	ns	.51	4,207	ns
Non-Members	5.24	2.67						
MEDICAL SATISFACTION								
Club Members	4.21	.79	266	4.40	***	5.96	4,226	*
Non-Members	3.69	1.04						
II. FAMILY RELATIONSHIPS								
POSITIVE FAMILY ENVIRONMENT								
Club Members	3.51	.48	259	.66	ns	.71	4,233	ns
Non-Members	3.46	.53						
FE-EXPRESSIVENESS								
Club Members	3.32	.62	245	2.20	*	.67	4,211	ns
Non-Members	3.15	.58						
FE-COHESION								
Club Members	3.86	.73	255	.36	ns	.44	4,221	ns
Non-Members	3.83	.72						
FE-CONFLICT								
Club Members	2.63	.64	251	1.32	ns	3.58	4,217	(.06)
Non-Members	2.51	.69						
CHANGE IN CLOSENESS								
Club Members	3.41	.62	231	.78	ns	1.17	4,201	ns
Non-Members	3.35	.58						
MISBEHAVIOR								
Club Members	2.28	.50	254	-.27	ns	1.25	4,220	ns
Non-Members	2.30	.64						
DISRESPECT&UNCOOPERATIVENESS								
Club Members	2.77	.54	257	1.39	ns	2.66	4,223	ns
Non-Members	2.68	.54						
NON-ADHERENCE								
Club Members	2.42	1.11	107	.80	ns	1.71	6,96 ⁴	ns
Non-Members	2.25	1.14						
MINIMIZATION								
Club Members	2.48	.64	259	1.94	*	3.08	4,223	(.08)
Non-Members	2.32	.67						
NEGOTIATION								
Club Members	3.74	.53	250	.91	ns	.03	4,216	ns
Non-Members	3.68	.58						

¹ *.05 or less; **=.01 or less; ***=.001 or less

² Average Family Income, Average Education of Parents, and Treatment Severity were entered as covariates before the group membership variable. The F recorded is for the effect of group membership beyond that accounted for by covariates.

³ Direction of relationship reversed after covariance analysis.

⁴ Whether exercises were prescribed and whether the child had been braced were also entered as covariates.

Table 1
(continued)

Variables	t-tests					Covariance Analyses		
	Mean	S.D.	DF	t	Prob.	F	df	Prob.
II. FAMILY RELATIONSHIPS (cont.)								
RATIONALIZED WITHDRAWAL								
Club Members	2.58	.62	258	-.80	ns	.09	4,223	ns
Non-Members	2.64	.62						
PUNITIVENESS								
Club Members	2.90	.60	256	-.33	ns	.20	4,221	ns
Non-Members	2.93	.59						
ADVICE SEEKING								
Club Members	1.33	.33	263	1.06	ns	1.56	4,223	ns
Non-Members	1.28	.35						
POSITIVE COMPARISONS								
Club Members	3.00	.70	264	.07	ns	3.94 ³	4,225	*
Non-Members	2.99	.64						
III. BACKGROUND								
1. Group Participation								
RECEIVE INFORMATION								
Club Members	3.29	1.06	248	-2.96	**	.67	4,209	ns
Non-Members	3.67	.97						
RECEIVE EMOTIONAL SUPPORT								
Club Members	3.68	1.09	249	3.75	***	14.65	4,209	***
Non-Members	3.15	1.11						
HELP OTHERS								
Club Members	3.08	1.22	248	-5.46	***	16.93	4,210	***
Non-Members	3.82	.93						
ORGANIZATIONAL PARTICIPATIONS								
Club Members	3.00	1.12	265	6.40	***	16.01	4,224	***
Non-Members	2.08	1.17						
LEVEL OF ACTIVITY IN ORGANIZATIONS								
Club Member	3.49	1.36	222	2.38	*	2.34	4,223	ns
Non-Members	3.02	1.50						
2. Treatment Background								
MONTHS SINCE DIAGNOSIS								
Club Members	40.83	26.80	265	-.27	ns	--	--	--
Non-Members	43.08	83.47						
CURVE ON DETECTION (°)								
Club Members	34.36	17.08	195	2.71	**	--	--	--
Non-Members	27.88	16.42						
CURRENT CURVE (°)								
Club Members	26.06	13.09	182	-.04	ns	--	--	--
Non-Members	26.17	19.17						
MONTHS BRACE WORN								
Club Members	28.13	14.78	197	3.84	***	--	--	--
Non-Members	18.46	15.86						
NUMBER OF CHILDREN WITH SCOLIOSIS								
Club Members	1.40	.60	267	4.60	***	--	--	--
Non-Members	1.12	.41						
TREATMENT SEVERITY								
Club Members	3.30	.71	267	5.29	***	--	--	--
Non-Members	2.71	1.01						

Table 1
(continued)

Variables	t-tests					Covariance Analyses		
	Mean	S.D.	DF	t	Prob.	F	DF	Prob.
III. BACKGROUND (cont.)								
3. Demographics								
FAMILY INCOME								
Club Members	7.26	2.45	243	5.07	***	--	--	--
Non-Members	5.66	2.40						
PARENTS AVG. EDUCATION								
Club Members	4.99	1.32	247	4.54	***	--	--	--
Non-Members	4.25	1.22						
NUMBER OF CHILDREN								
Club Members	3.07	1.41	267	2.91	**	--	--	--
Non-Members	2.61	1.21						

Table 2
Chi-Square Analyses for Parents

Variables	Club Members	Non-Members	Chi-Square	DF	Prob.
	n=109	n=160			
1. Group Participation					
LEADER IN CLUBS R PARTICIPATES IN?					
No	35.6%	45.4%	1.42	1	ns
Yes	64.4	54.6			
2. Treatment Background					
RESPONDENT EVER CONSULTED THERAPIST?					
No	74.1	63.6	3.08	1	(.08)
Yes	25.9	16.4			
CHILD EVER SEEN THERAPIST?					
No	83.3	88.7	1.15	1	ns
Yes	16.7	11.3			
MAJOR TREATMENT MODES					
Never Treated	0.9	6.3	56.81	4	***
Curve Watched by M.D.	7.3	41.9			
Braced	56.9	34.4			
Surgery	30.3	9.4			
Both Bracing and Surgery	4.6	8.1			
PATIENT STATUS					
Past Patient	43.1	27.3	6.47	1	**
Current Patient	56.9	72.7			
EXERCISES RECOMMENDED?					
No	33.0	47.1	4.71	1	*
Yes	67.0	52.9			

*=.05 or less; **=.01 or less; ***=.001 or less

Table 2
Chi-Square Analyses for Parents
(continued)

<u>Variables</u>	<u>Club Members</u>	<u>Non-Members</u>	<u>Chi-Square</u>	<u>DF</u>	<u>Prob.</u>
3. Demographics					
SEX					
Male	11.1%	10.7%	.00	1	ns
Female	88.9	89.3			
RELIGION					
Protestant	27.8	49.4	49.67	3	***
Catholic	28.7	35.0			
Jewish	36.1	3.8			
None, Other	7.4	11.9			
RACE					
White	96.3	92.5	1.08	1	ns
Non-White	3.7	7.5			
MARITAL STATUS					
Not Married	6.4	12.5	2.02	1	ns
Married	93.6	87.5			

Table 3

T-tests and Covariance Analyses for Children

Variables	t-tests					Covariance Analyses ²		
	Mean	S.D.	DF	t	Prob. ¹	F	df	Prob.
I. PSYCHO-SOCIAL								
SELF-ESTEEM								
Club Members	3.45	.89	229	.21	ns	.01	4,225	ns
Non-Members	3.43	.95						
PSYCHO-SOMATIC SYMPTOMS								
Club Members	13.23	6.06	235	.47	ns	.04	4,231	ns
Non-Members	12.86	5.89						
FEELINGS OF ATTRACTIVENESS								
Club Members	3.24	1.00	230	-1.09	ns	1.32	4,226	ns
Non-Members	3.37	.87						
FEELINGS OF SHAME								
Club Members	1.98	.81	232	-.73	ns	.21	4,228	ns
Non-Members	2.07	.95						
FEELINGS OF ALIENATION								
Club Members	2.85	.92	232	1.72	(.09)	.08	4,228	ns
Non-Members	2.64	.95						
BODY IMAGE								
Club Members	1.88	.52	232	-3.15	**	.34 ³	5,132	ns
Non-Members	2.10	.53						
II. FAMILY RELATIONSHIPS								
POSITIVE FAMILY ENVIRONMENT								
Club Members	3.20	.50	226	-2.32	ns	6.95	4,222	**
Non-Members	3.36	.53						
FE-EXPRESSIVENESS								
Club Members	3.18	.69	228	1.51	ns	1.04	4,224	ns
Non-Members	3.04	.70						
FE-COHESION								
Club Members	3.66	.74	219	-1.94	*	5.25	4,215	*
Non-Members	3.87	.82						
FE-CONFLICT								
Club Members	3.05	.79	221	3.74	***	15.45	4,217	***
Non-Members	2.64	.81						
CLOSENESS OF RELATIONSHIP WITH MOTHER								
Club Members	3.25	.81	233	-2.09	*	2.86	4,229	**
Non-Members	3.45	.64						
CLOSENESS OF RELATIONSHIP WITH FATHER								
Club Members	2.99	.80	226	-.09	ns	.01	4,222	ns
Non-Members	3.00	.95						
CHANGE IN CLOSENESS								
Club Members	3.40	.57	228	.95	ns	.09	4,224	ns
Non-Members	3.33	.55						
III. BACKGROUND								
AGE								
Club Members	15.29	2.73	235	1.45	ns	--	--	--
Non-Members	14.60	4.03						

¹ *.05 or less; **.01 or less; ***.001 or less² Age, whether respondent had been braced, or whether surgery had been performed were entered as covariates before the group membership variable. The F recorded is for the effect of group membership beyond that accounted for by covariates.³ Severity of curve was also entered as a covariate.

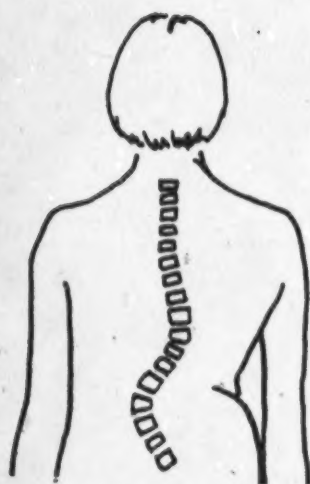
Table 4
Chi-Square Analyses for Children

<u>Variables</u>	<u>Club Members</u>	<u>Non-Members</u>	<u>Chi-Square</u>	<u>DF</u>	<u>Prob.</u>
SEX					
Male	8.5%	16.8%	2.65	1	ns
Female	91.5	83.2			
EVER WORN BRACE?					
No	30.9	52.8	10.20	1	**
Yes	69.1	47.2			
EVER HAD SURGERY?					
No	70.2	84.6	6.23	1	**
Yes	29.8	15.4			

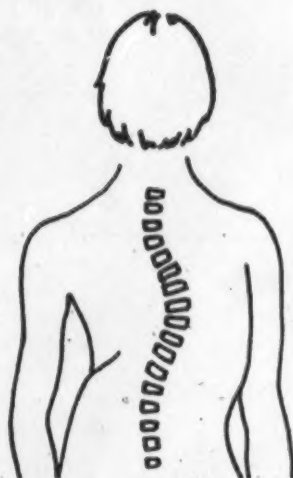
FIGURE 1

BODY IMAGE MEASURE

Below are several drawings of young people as you would see them from behind.
Please choose the one drawing which comes closest to what you look like by *circling*
the number right below it.



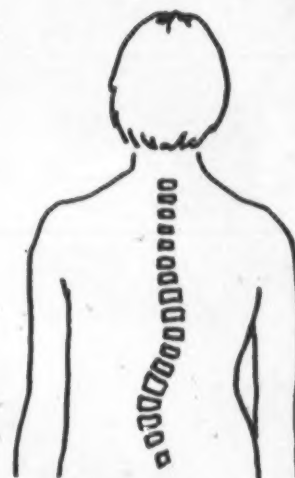
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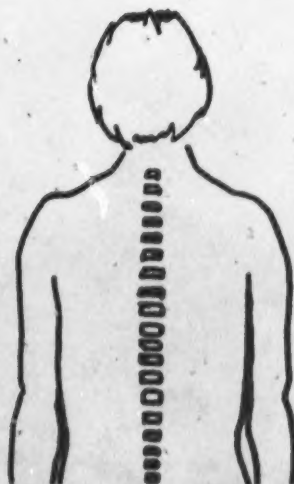
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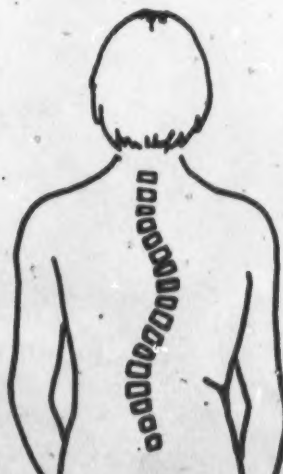
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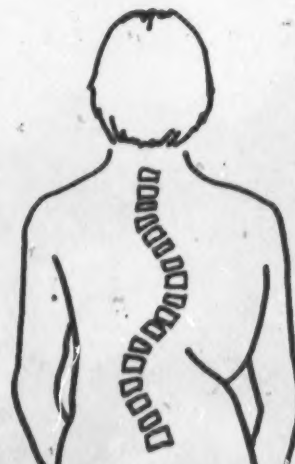
4



5



6



7

24

Factor Analysis of Coping Items

FACTOR	1	2	3	4	5	6
1. MINIMIZATION ($\alpha = .74$)						
Tell yourself it's not really important	.72	-.09	.12	.11	.06	-.05
Try to ignore what's going on.	.55	-.16	-.06	-.09	.18	.13
Decide there's really nothing you can do to change things.	.53	-.23	.36	-.03	.09	.06
Try to notice only the good things.	.52	.00	.32	.05	.06	-.02
Think that it's behavior that he/she will just outgrow.	.44	-.07	.40	.01	.00	-.04
2. NEGOTIATION ($\alpha = .70$)						
Sit down and talk things out.	-.19	.81	.02	-.01	-.06	-.00
You and your children have a heart-to-heart talk.	-.10	.61	.11	-.05	-.07	-.17
Try to find a fair compromise.	.02	.53	-.08	.11	.00	.01
3. RATIONALIZED WITHDRAWAL ($\alpha = .53$)						
Remind yourself that things could be worse.	.11	.06	.64	.06	.07	.10
Look around at other parents to see how much better off you are than they.	-.01	.13	.50	.01	-.10	.01
Keep out of your child's way for a while.	.26	-.10	.41	-.04	.05	.27
Just keep hurt feelings to yourself.	.09	-.25	.34	-.09	.13	.16
4. PUNITIVENESS ($\alpha = .71$)						
Take away a privilege.	-.05	.01	.05	.74	.07	.11
Threaten some kind of punishment.	-.06	-.21	.03	.72	.17	.11
Scold your children.	.02	.02	-.08	.48	.13	.11
5. ADVICE SEEKING ($\alpha = .57$)						
In the past year have you asked for the advice of a relative in dealing with any difficulties in your child(ren)'s behavior?	.03	.10	-.12	-.08	-.64	.07
...from friends.	-.14	-.05	.01	-.08	-.55	.01
...professional person.	-.08	.05	.15	-.13	-.42	-.14
6. POSITIVE COMPARISONS ($\alpha = .64$)						
As time goes by, has being a parent generally become (much easier---much more difficult)?	-.01	-.03	.16	.18	.12	.72
Looking into the future, do you think that in the next year being a parent will become (much easier---much more difficult)?	.03	-.11	.09	.15	.00	.51
When you think of your experiences as a parent so far, how would you compare yourself with other parents? (many fewer problems---many more problems)	.02	-.21	.12	.09	.47	.30
During a typical day, how often do you find that problems of being a parent are on your mind (almost never...almost always)	-.00	.02	.22	.09	.38	.36